

**UNITED STATES DISTRICT COURT  
DISTRICT OF MINNESOTA**

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IN RE: NATIONAL HOCKEY LEAGUE )  
PLAYERS' CONCUSSION INJURY )  
LITIGATION )

No. 14-2551 (SRN/JSM)

This Document Relates to: ALL ACTIONS )

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**DECLARATION OF JOHN H. BEISNER**

I, JOHN H. BEISNER, declare under penalty of perjury pursuant to 28 U.S.C. § 1746 that the following is true and correct:

1. My name is John H. Beisner. I am one of the attorneys representing the National Hockey League ("NHL") in the above-referenced matter and submit this declaration in support of Defendant NHL's Opposition To Plaintiffs' Motion For Class Certification And For Appointment Of Class Representatives And Class Counsel and in support of the NHL's contemporaneously filed motions to exclude the testimony of plaintiffs' experts. The facts stated herein are based on my own personal knowledge.

2. In its briefing, the NHL relies on the opinions of some of the foremost experts in a number of fields – including the fields of biomechanical engineering, data analysis, epidemiology, human factors, neurology, neuropathology, neuropsychology, psychiatry, psychology, sports medicine, and video analysis. I make this declaration to provide a summary of these experts' qualifications and the substance of their opinions for the Court's reference.

3. Attached as **Exhibit A** is the declaration of Dr. Lisa Brenner. Dr. Brenner is a Professor and Rehabilitation Psychologist at the University of Colorado, Anschutz Medical Campus. She is a psychologist with expertise in physical medicine and rehabilitation, as well as psychiatry and neurology, with a special emphasis on traumatic brain injury (“TBI”) assessment, treatment, and research. Dr. Brenner opines about the evolution of science regarding mild TBI (“mTBI”) and neurodegenerative diseases, and the relationship between scientific research and clinical practice, with a specific focus on best practices for incorporating evidence into clinical practice. She also offers opinions in response to Professor Stephen Casper’s opinion that the historical record has documented the long-term risks of concussions and subconcussive hits “for a long time.”

4. Attached as **Exhibit B** is the declaration of Dr. J. David Cassidy. Dr. Cassidy is a Professor at the Dalla Lana School of Public Health in the Division of Epidemiology and the Clinical Epidemiology and Health Care Research program at the Institute of Health Policy, Management and Evaluation at the University of Toronto. Dr. Cassidy served as the scientific secretary (i.e., responsible for the scientific conduct) of the World Health Organization (WHO) Collaborating Centre for Neurotrauma, Prevention, Management and Rehabilitation Task Force on Mild Traumatic Brain Injury. Dr. Cassidy was also the principal investigator and head of the International Collaboration on MTBI Prognosis (ICoMP), which published a series of systematic reviews on the prognosis and consequences of MTBI in a supplement of the Archives of Physical Medicine and Rehabilitation in 2014.

5. Attached as **Exhibit C** is the declaration of Dr. Rudolph Castellani. Dr. Castellani is a Neuropathologist at and Founding Director of the Western Michigan University Center for Neuropathology. He has examined the brains of collegiate and professional football players and boxers and sits as the only pathologist or neuropathologist on the scientific committee for the International Concussion and Head Injury Research Foundation, which is part of a multi-centered, multi-sport, longitudinal study on retired athletes and is the largest research project of its kind in the world. Dr. Castellani provides medical and scientific testimony about the role of tau in neurodegenerative diseases, including its potential role as a factor that drives diseases processes within the brain. He also opines about the limitations of current research on the relationship between mild traumatic brain injury and tauopathies, including Alzheimer's disease and chronic traumatic encephalopathy ("CTE").

6. Attached as **Exhibit D** is the supplemental declaration of Dr. Jennifer Finkel. Dr. Finkel is a psychiatrist dually appointed as an Assistant Professor in the Departments of Psychiatry and Neurology at the Icahn School of Medicine at Mount Sinai in New York City. She conducted individual psychiatric evaluations of the proposed class representative plaintiffs in this litigation and provides an expert psychiatric opinion and report setting forth opinions based on those evaluations, as well as an evaluation of plaintiff fact sheets and other discovery produced in this case. Dr. Finkel's reports from these individual evaluations are attached as **Exhibit E**.

7. Attached as **Exhibit F** is the declaration of Dr. James Funk. Dr. Funk is a licensed professional engineer in the fields of biomedical and mechanical engineering,

with specific training and accreditation in accident reconstruction. He works primarily as an independent consultant and is also employed as a researcher at the University of Virginia Center for Applied Biomechanics and serves as an adjunct faculty member in biomedical engineering at the Virginia Tech-Wake Forest Center for Injury Biomechanics at Virginia Tech. He opines about the report submitted by Professor Thomas Blaine Hoshizaki in this litigation, with a focus on the scientific reliability of the methodology he used to arrive at his ultimate opinion that an average NHL player has likely received a head impact in each game sufficient to cause permanent injury to the brain, including an assessment of each step of that methodology as well as Professor Hoshizaki's overall approach.

8. Attached as **Exhibit G** is the declaration of Dr. Kevin Guskiewicz. Dr. Guskiewicz is the Dean of the College of Arts and Sciences at the University of North Carolina and the Kenan Distinguished Professor of Exercise and Sport Science. He also holds appointments in the Department of Orthopaedics, Department of Physical Medicine and Rehabilitation, the UNC Injury Prevention Research Center and doctoral program in Human Movement Science at the University of North Carolina. Dean Guskiewicz summarizes his extensive work related to concussions in sport, including studies that address the potential long-term effects of concussion. He also opines about the state of the scientific literature with respect to the proposed relationship between concussions and subconcussive hits and long-term neurodegenerative disorders; subconcussive impacts generally; and the experimental nature of Diffusion Tensor Imaging.

9. Attached as **Exhibit H** is the declaration of Dr. Lili-Naz Hazrati. Dr. Hazrati is a Neuropathologist at the Hospital for Sick Children and a Clinician Scientist at the University of Toronto, Department of Laboratory Medicine and Pathobiology. She provides medical and scientific opinions about the variation of pathological findings observed in contact sports athletes, as well as the appearance of CTE pathology in individuals without a history of head injury. She also opines on the numerous potential causes of those pathologies, including but not limited to Alzheimer's disease, Parkinson's disease ("PD"), and CTE.

10. Attached as **Exhibit I** is the declaration of Dr. Grant Iverson. Dr. Iverson is a Professor (Investigation Track) in the Department of Physical Medicine and Rehabilitation at Harvard Medical School. He is also the Director of the Neuropsychology Outcome Assessment Laboratory in the Center for Health and Rehabilitation Research, within the Spaulding Rehabilitation Network and serves as the Director of the MassGeneral Hospital *for Children*<sup>TM</sup> Sports Concussion Program and as the Associate Director of the Traumatic Brain Injury Program for Home Base, a Red Sox Foundation and Massachusetts General Hospital Program. He opines on the history and state of the scientific research regarding CTE and other later-in-life neurodegenerative diseases or conditions. He also opines on the current state of the science concerning long-term neurodegenerative diseases and how it has influenced clinical advice in his experience. Dr. Iverson also offers opinions in response to assertions of plaintiffs' experts, including Prof. Casper's opinion that little has changed over the decades with respect to the diagnosis, management, and treatment of concussions.

11. Attached as **Exhibit J** is the declaration of Ms. Sonya Kwon. Ms. Kwon is Managing Director at Navigant Consulting, Inc., a provider of financial and consulting services with over 5,000 professionals worldwide. She leads the national Disputes and Investigations Class Action Services practice that specializes in the application of financial, statistical, and complex data intensive analyses to legal and regulatory issues. She opines based on her survey of historical NHL data to evaluate the frequency of concussions in NHL players.

12. Attached as **Exhibit K** is the declaration of Dr. Paul McCrory. Dr. McCrory is the Chair of the International Concussion in Sport Consensus Group, which organized the major consensus meetings in the field: Vienna in 2001, Prague in 2004, Zurich in 2008, Zurich in 2012, and Berlin in 2016. He also has been a Member of the Concussion / mTBI Subgroup for the U.S. National Institutes of Health (“NIH”); is past president of the Australasian College of Sports Physicians; serves on the Board of the Institute of Sports & Exercise Medicine in the United Kingdom; is chair of the Scientific Advisory Board of the International Concussion and Head Injury Research Foundation; and is Research Lead and Chair of the research advisory board for the Sports Surgery Clinic, Dublin, Ireland. Dr. McCrory opines on the evolution of concussion research and science, including the formation and progress of an international group of experts who convened to better understand the nature, treatment, and consequences of mild traumatic brain injury in sports.

13. Attached as **Exhibit L** is the declaration of Dr. Douglas McKeag. Dr. McKeag is a practicing physician at Oregon Health and Science University in Portland,

Oregon. He has specialized in family medicine and sports medicine for more than 40 years and has treated hockey players at all levels of play. Dr. McKeag opines in response to various opinions offered by Prof. Casper. Specifically, he responds to the following opinions of Prof. Casper: (1) that the definition of concussion has not changed in significant ways and has not affected the way such injuries are managed or treated; (2) that sports medicine has been influenced by “large corporate entities and governing institutions,” resulting in the failure of sports medicine practitioners to prioritize their patients’ interests; and (3) that physicians have had a duty to warn regarding the long-term risks of repeated head injuries in sports since at least 1975.

14. Attached as **Exhibit M** is the declaration of Mr. William Neale. Mr. Neale is the Director of Visualization at Kineticorp, a Denver-based forensic engineering and visualization firm. For the past 17 years, the daily focus of his professional activities has been on video analysis, photogrammetry, videogrammetry, computer modeling, and visualization, including a primary focus on the determination of three-dimensional position, distances, and velocities from video images for quantifying impact conditions. He offers opinions reviewing and critiquing the video analysis utilized by plaintiffs’ proposed expert, Prof. Hoshizaki in formulating his opinions in this litigation.

15. Attached as **Exhibit N** are the reports of the neuropsychological examinations of the individual plaintiffs conducted by Dr. Marc Norman. Dr. Norman is a neuropsychologist and a Professor of Psychiatry at the University of California, San Diego School of Medicine. He conducted neuropsychological examinations of named plaintiffs LaCouture, Larson, Leeman, and Nicholls.

16. Attached as **Exhibit O** is the supplemental declaration of Dr. C. Warren Olanow. Dr. Olanow is a Professor and Chairman Emeritus in the Department of Neurology, and Professor Emeritus in the Department of Neuroscience, at the Mount Sinai School of Medicine in New York City. Among his many other accomplishments, Dr. Olanow was one of the first researchers to propose that the misfolded proteins that characterize neurodegenerative disorders, and specifically alpha synuclein in PD, were prions, work that ultimately led to the award of the Nobel Prize to Dr. Stanley Prusiner, with whom Dr. Olanow published a groundbreaking paper regarding the spread of misfolded proteins to healthy nerve cells in *Nature Medicine* in 2008. Dr. Olanow previously conducted independent neurological evaluations of four of the proposed class representative plaintiffs in this litigation, and provided expert reports setting forth his findings and opinions based on those evaluations. In his supplemental report in connection with the NHL's opposition to class certification, Dr. Olanow offers opinions regarding: (1) the feasibility of dividing retired NHL players into two distinct classes as proposed by plaintiffs; (2) plaintiffs' theory as proposed by Dr. Cantu and Prof. Hoshizaki that the loss of white matter resulting from "head hits" causes or promotes the development of neurodegenerative brain diseases; (3) plaintiffs' proposal, supported by the declaration of Dr. Cantu, that the NHL be required to establish a medical-monitoring program for retired NHL players; and (4) the insinuation by Prof. Casper that physicians violated their Hippocratic Oath and medical ethics principles by not warning patients about the theoretical risk that a head injury can cause a neurodegenerative disorder. Dr.



Olanow also previously conducted neurological examinations of the named plaintiffs, and the reports from these examinations are attached as **Exhibit P**.

17. Attached as **Exhibit Q** is the declaration of Dr. Matthew Panzer. Dr. Panzer is a biomedical engineer with expertise in finite element modeling, Assistant Professor of Mechanical and Aerospace Engineering at the University of Virginia, and head of the computational research group at the Center for Applied Biomechanics. He opines on the methods used by Prof. Hoshizaki for determining the alleged risk of brain injury associated with head impacts experienced by NHL players, and in particular on the methods used in connection with Prof. Hoshizaki's finite element model, the University of College Dublin Brain Trauma Model.

18. Attached as **Exhibit R** is the declaration of Dr. Christopher Randolph. Dr. Randolph is a board-certified clinical neuropsychologist who currently serves as Chief Scientific Officer for MedAvante and as Clinical Professor in the Department of Neurology at Loyola University Medical Center in Maywood, Illinois. Dr. Randolph has extensive experience in clinical neuropsychological test development, translation, and validation, and authored the Repeatable Battery for the Assessment of Neuropsychological Status, a neurocognitive battery used widely around the world. He has also consulted on the revisions of the Wechsler intelligence and memory scales. Dr. Randolph opines regarding the alleged connection between hockey and various neurodegenerative diseases, as well as the advisability of plaintiffs' proposed medical monitoring program and epidemiological study, as proposed by Drs. Cantu and Comstock, respectively.

19. Attached as **Exhibit S** is the declaration of Dr. Joseph Sala. Dr. Sala is Principal Scientist and Director of the Human Factors Practice at Exponent, where he routinely addresses how the capabilities and limitations of people interact with the products, equipment, and systems in their environment, and how this interaction affects safety. He opines on the psychological issues in human attention and information processing with respect to safety communications. Dr. Sala also opines as to whether there is any basis to conclude that all members of the putative class would have similarly sought, attended to, interpreted, and had similar behavioral responses to these safety communications.

20. Attached as **Exhibit T** is the declaration of Dr. Julie A. Schneider. Dr. Schneider is a Professor of Neuropathology and Neurological Sciences at Rush University Medical Center in Chicago, Illinois. She is also Associate Director, Neuropathology Core Leader, and Senior Neuropathologist of the Rush Alzheimer's Disease Center, one of 32 Alzheimer's Disease Centers in the nation funded by the NIH. Dr. Schneider regularly examines brains of deceased patients with complex neurodegenerative diseases and the brains of deceased participants of longitudinal studies on aging and dementia. She also pathologically diagnoses both common and rare neurodegenerative diseases related to cognitive and motor impairments, and sees patients with memory complaints and neurobehavioral disorders at the Rush Memory Clinic, where she has been an attending physician for the past 20 years. Dr. Schneider opines about the state of the science regarding CTE, with a particular focus on pathological research. She also opines on possible neuropathological connections between repetitive

concussions (mild traumatic brain injury or mTBI) or subconcussive hits and CTE. And Dr. Schneider addresses the state of the scientific research concerning the concepts of white matter loss and cerebral reserve put forward by plaintiffs' expert, Dr. Cantu.

21. Attached as **Exhibit U** is the declaration of Dr. Kristine Yaffe. Dr. Yaffe is a Professor in the Departments of Psychiatry, Neurology and Epidemiology at the University of California San Francisco ("UCSF"). She also serves as the director of the UCSF Dementia Epidemiology Research Group, which conducts research relating to cognitive function and dementia in aging populations throughout the United States; the Chief of Neuropsychiatry and Directory of the Memory Disorders Clinic at the San Francisco VA; the principal investigator of the data core for the Alzheimer's Disease Research Center at UCSF; the Roy and Marie Scola Endowed Chair in Psychiatry; and the Vice Chair of the Department of Psychiatry at UCSF. Dr. Yaffe is also a researcher, epidemiologist, and practicing neurologist/psychiatrist who treats patients suffering from neurodegenerative diseases. She opines regarding the potential link between concussions or subconcussive hits and neurodegenerative diseases and cognitive and neurobehavioral symptoms. Dr. Yaffe also responds to the assertions made in the expert reports of plaintiffs' experts Dr. Cantu and Prof. Casper with respect to the potential long-term risks of head hits and what, if anything, the medical community has known about those risks over time.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 27, 2017.

s/ John H. Beisner

John H. Beisner